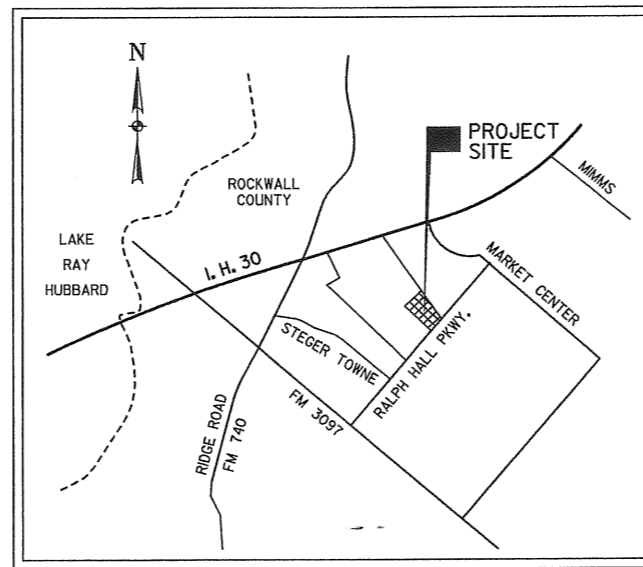


ENGINEERING CONSTRUCTION PLANS FOR LAKE POINTE CHURCH

FILE

PARKING AND DRAINAGE IMPROVEMENTS THE CITY OF ROCKWALL, TEXAS



LOCATION MAP
NOT TO SCALE

**NOT AS-BUILT
PLANS.
ENGINEER
DIDN'T
PROVIDE
RECORD
DRAWINGS TO**

APPROVED FOR
CONSTRUCTION

NOV - 2 2005

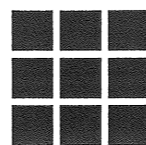
City of Rockwall Engineering Dept.
City Engineer: CAT

SHEET INDEX

C0.0	COVER SHEET
C1.01	DRAINAGE AREA MAP
C2.01	GRADING AND PAVING PLAN
C3.01	STORM DRAIN PLAN
C3.02	STORM DRAIN PROFILES
C4.01	EROSION CONTROL PLAN
C4.02	EROSION CONTROL NOTES & DETAILS

ENGINEER

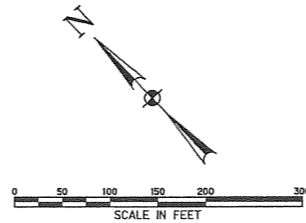
HALFF ASSOCIATES, INC.
8616 NORTHWEST PLAZA DR.
DALLAS, TEXAS 75225
(214) 346-6200
CONTACT: B. DAVID LITTLETON, P.E.



Halff Associates

ENGINEERS . ARCHITECTS . SCIENTISTS . PLANNERS . SURVEYORS





**NOT AS-BUILT
PLANS.
ENGINEER
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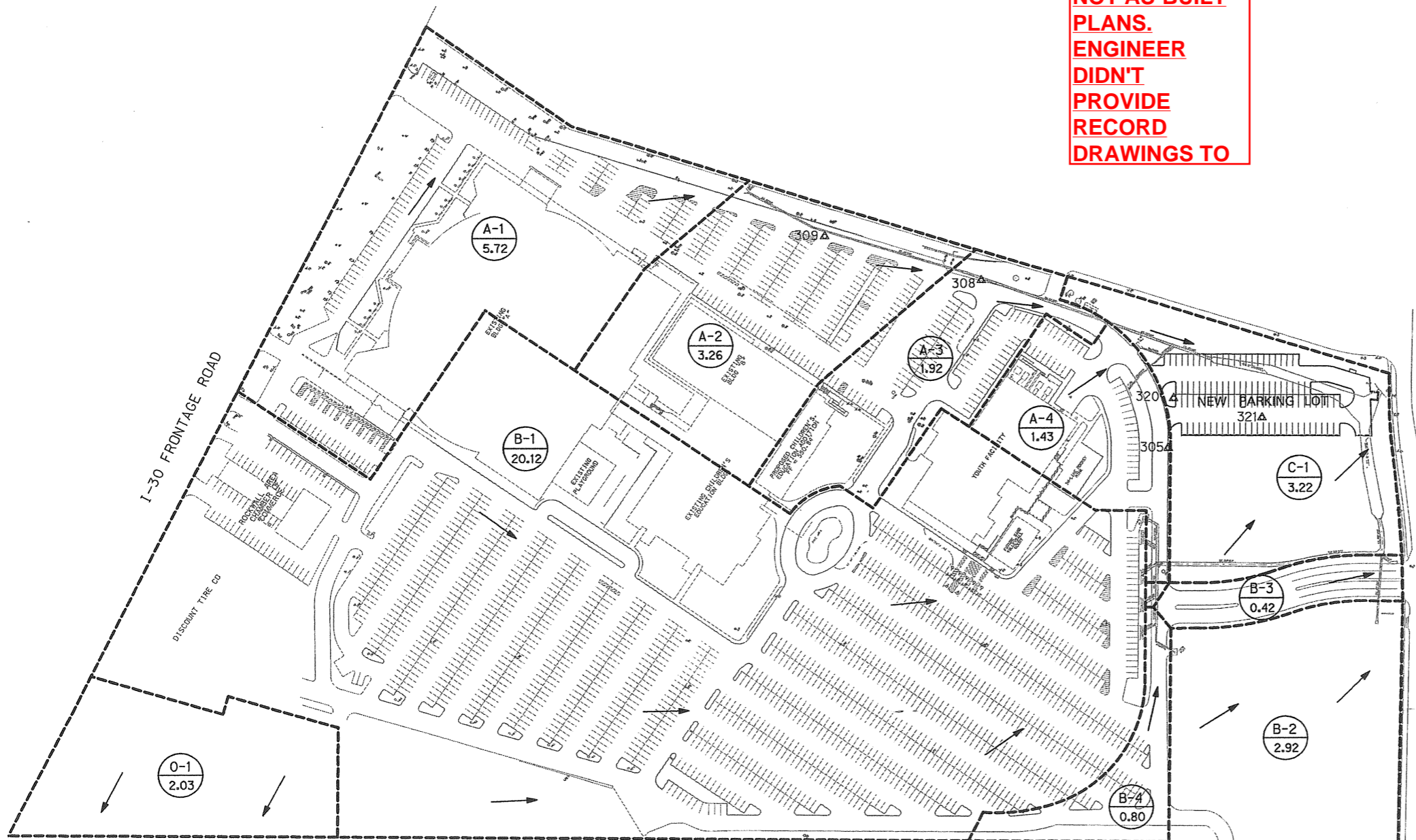
100 YR. RUNOFF CALCULATION

NO.	A (AC)	C	Tc (min)	I (in/hr)	Q (cfs)
A-1	5.72	0.9	14	9.0	46.33
A-2	3.26	0.9	14	9.0	26.41
A-3	1.92	0.9	13	9.3	16.07
A-4	1.43	0.9	12	9.5	12.23
B-1	20.12	0.9	19	8.3	150.30
B-2	2.92	0.9	13	9.3	24.44
B-3	0.42	0.9	13	9.3	3.52
B-4	0.80	0.9	14	9.0	6.48
C-1	3.22	0.9	12	9.5	27.53
O-1	2.03	0.9	10	9.8	17.90

DRAINAGE DESIGN CRITERIA

PIPE FLOW EQUATION
 $Q = 1.488 C I_{100}^2 A R^{2/3}$
 $Q_{100} = C I_{100} A$
 C=0.9
 A=AREA (ACRES)
 I_{100} IN./HR.
 t_c = TIME OF CONCENTRATION = MINIMUM OF 10 MIN.
 $n=0.013$

AREA DESIGNATION
 A-1
 5.72
 AREA IN ACRES



SURVEY CONTROL POINTS

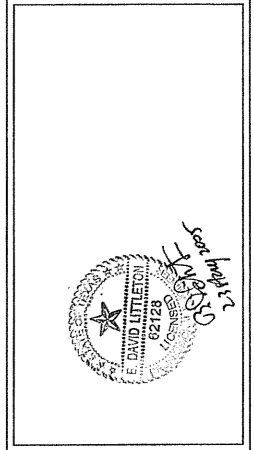
NO.	N	E	ELEV.	DESCRIPTION
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308	199372.25	300964.33	539.40	FND *X* IN CURB
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320	199036.87	301051.83	537.16	60D NAIL
321	198920.82	301129.61	542.42	60D NAIL

**APPROVED FOR
CONSTRUCTION**

NOV - 2 2005

City of Rockwall Engineering Dept.
City Engineer: _____

LAKE POINTE CHURCH
SOUTHEAST PARKING IMPROVEMENTS
ROCKWALL, TEXAS

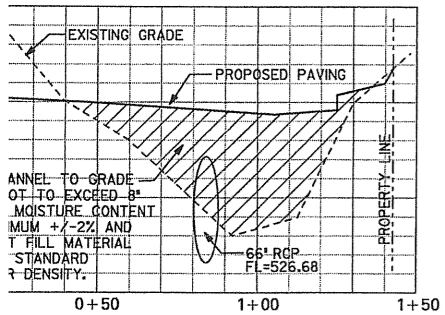
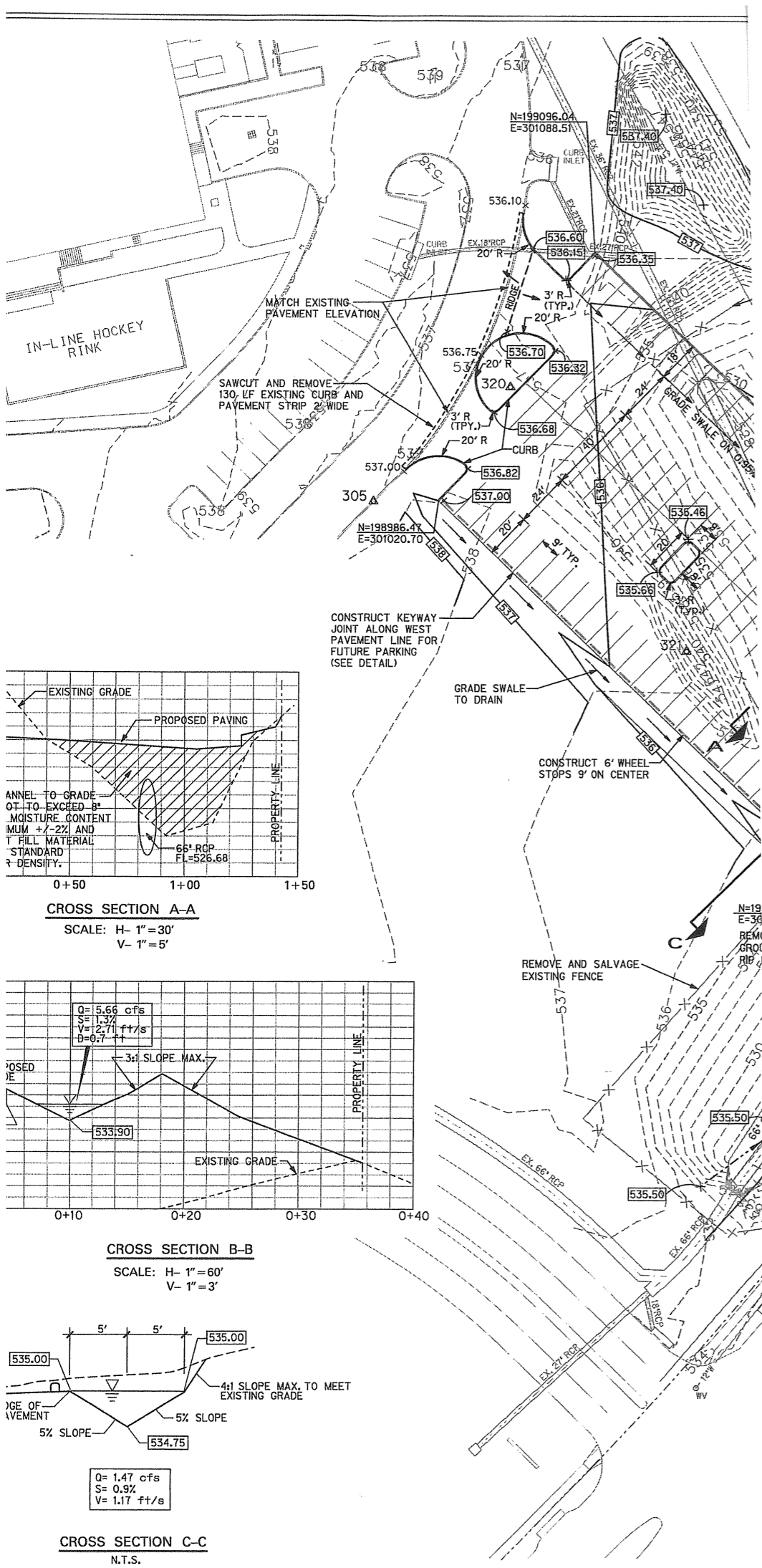


Half Associates, Inc.
ENGINEERS • ARCHITECTS • SCIENTISTS • PLANNERS • SURVEYORS
8606 NORTHWEST PLAZA DRIVE
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TEL (214) 346-6000
FAX (214) 759-0095

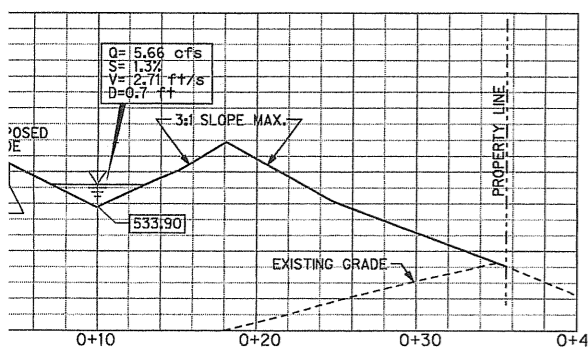
Project No: AVO # 21760
 Issued: _____
 Revisions:

No.	Date	Description

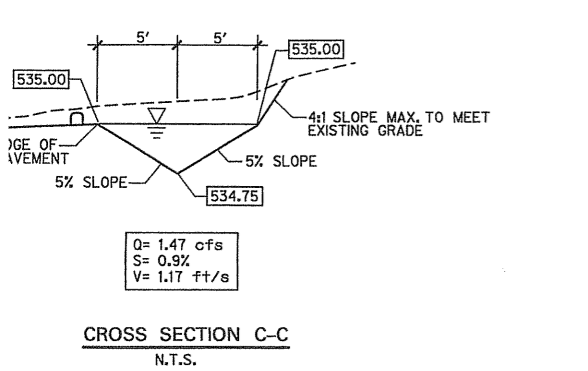
 Drawn by: JLS
 Checked by: JLR
 Sheet Title: **DRAINAGE AREA MAP**
 Sheet Number: **C1.01**



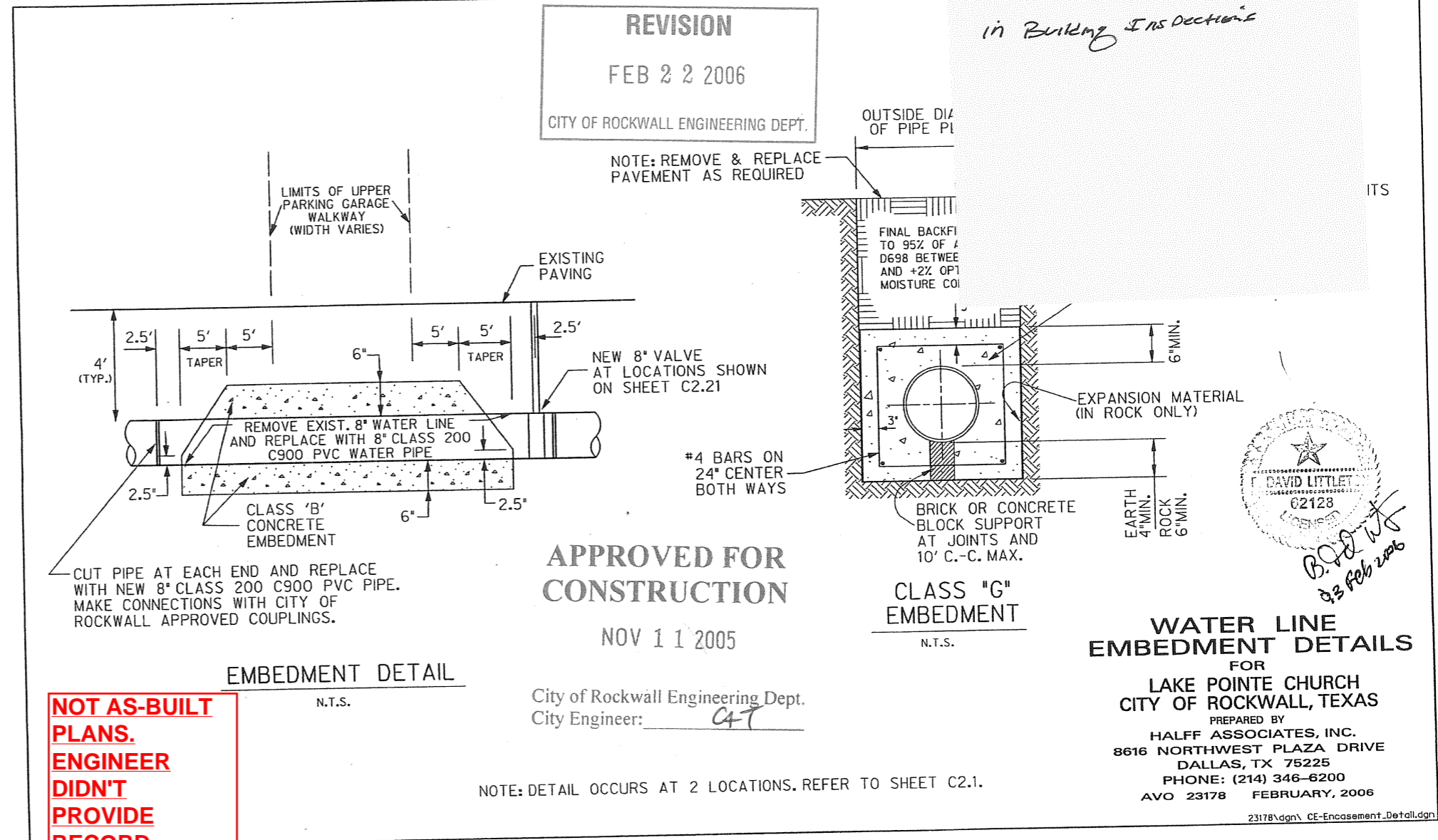
CROSS SECTION A-A
SCALE: H- 1"=30'
V- 1"=5'



CROSS SECTION B-B
SCALE: H- 1"=60'
V- 1"=3'



CROSS SECTION C-C
N.T.S.



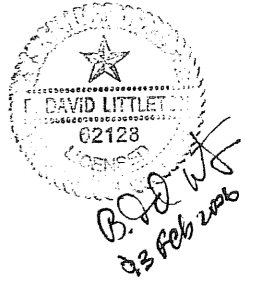
**NOT AS-BUILT
PLANS.
ENGINEER
DIDN'T
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RECORD
DRAWINGS TO**

REVISION
FEB 22 2006
CITY OF ROCKWALL ENGINEERING DEPT.

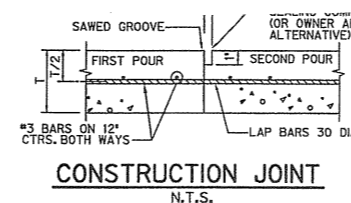
*SEE ARCHITECTURAL PLANS
IN BUILDING INS SECTIONS*

**APPROVED FOR
CONSTRUCTION**
NOV 11 2005
City of Rockwall Engineering Dept.
City Engineer: CAT

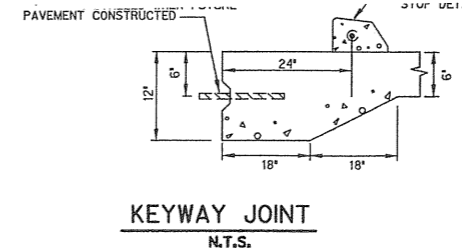
**WATER LINE
EMBEDMENT DETAILS**
FOR
LAKE POINTE CHURCH
CITY OF ROCKWALL, TEXAS
PREPARED BY
HALFF ASSOCIATES, INC.
8616 NORTHWEST PLAZA DRIVE
DALLAS, TX 75225
PHONE: (214) 346-6200
AVO 23178 FEBRUARY, 2006
23178\vdgn\ CE-Encasement_Detail.dgn



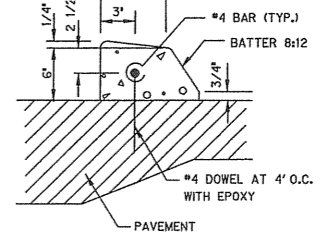
RALPH M. HALL PK



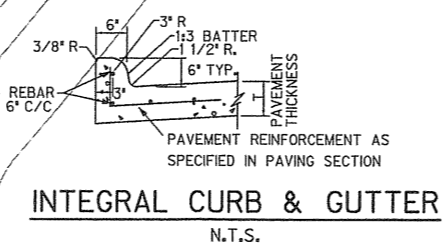
CONSTRUCTION JOINT
N.T.S.



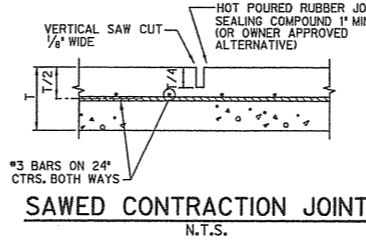
KEYWAY JOINT
N.T.S.



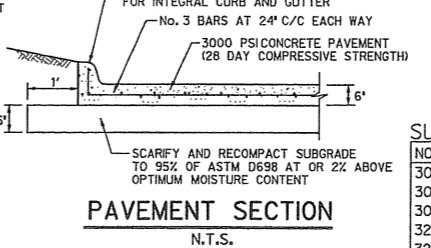
WHEEL STOP
N.T.S.



INTEGRAL CURB & GUTTER
N.T.S.



SAWED CONTRACTION JOINT
N.T.S.



PAVEMENT SECTION
N.T.S.

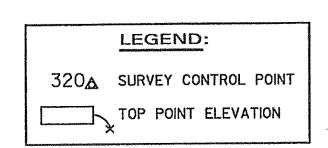
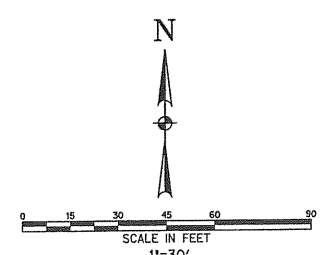
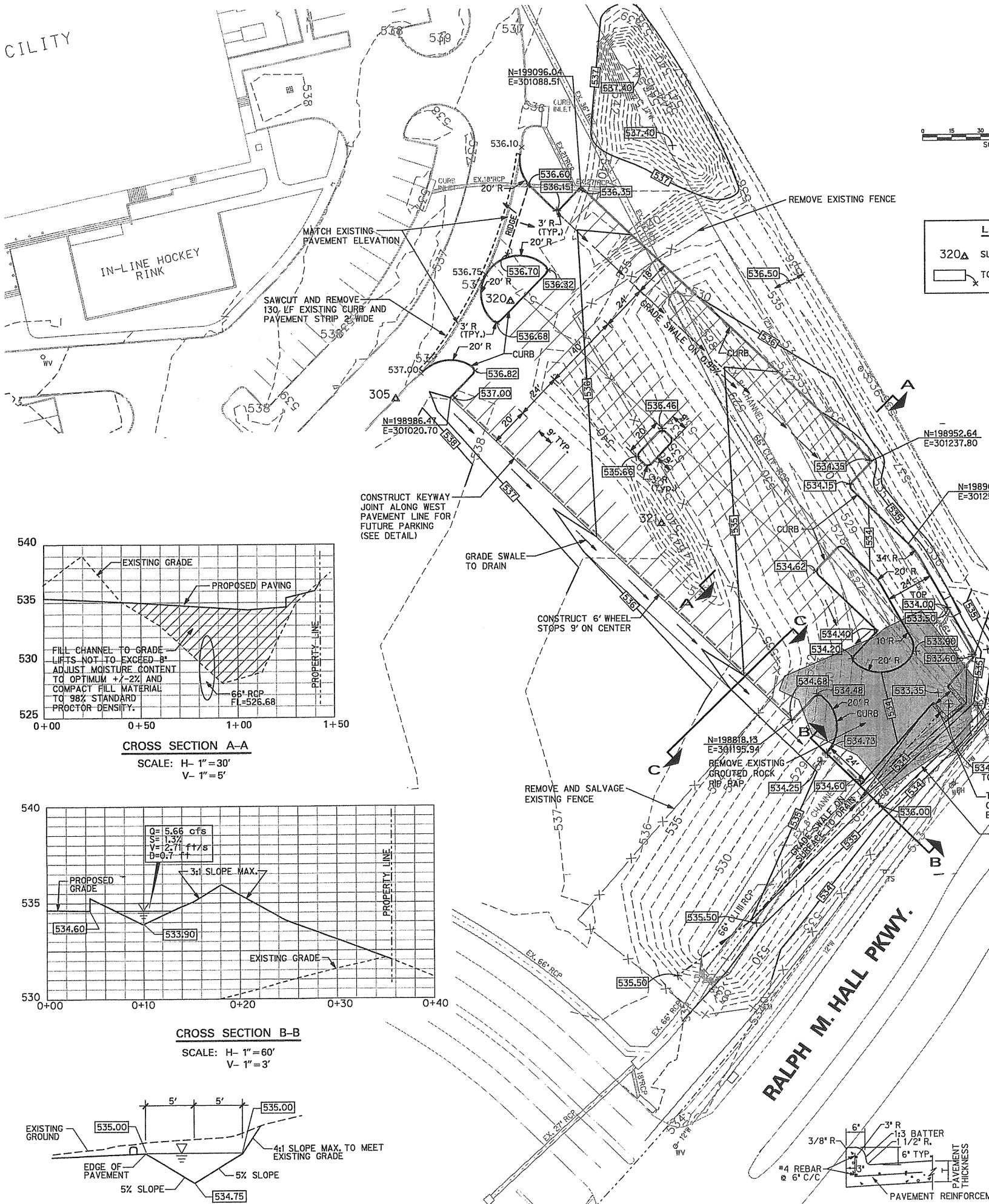
SURVEY CONTROL POINTS

NO.	N	E	ELEV.	DESCRIPTION
305	198986.18	300992.49	537.52	1/2" IN CURB
308	199372.25	300964.33	539.40	FND 1/2" IN CURB
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320	199036.87	301051.83	537.16	60D NAIL
321	198920.82	301129.61	542.42	60D NAIL

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FAX (214) 739-0095

Project No: AVO # 21760
Issued:
Revisions:
No. Date Description
Drawn by: JLS
Checked by: JLR
Sheet Title
GRADING AND PAVING PLAN
C2.01
Sheet Number

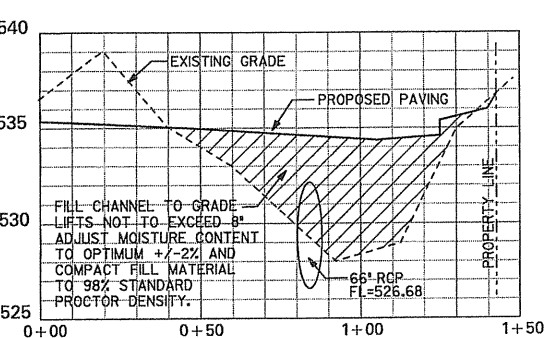
CILITY



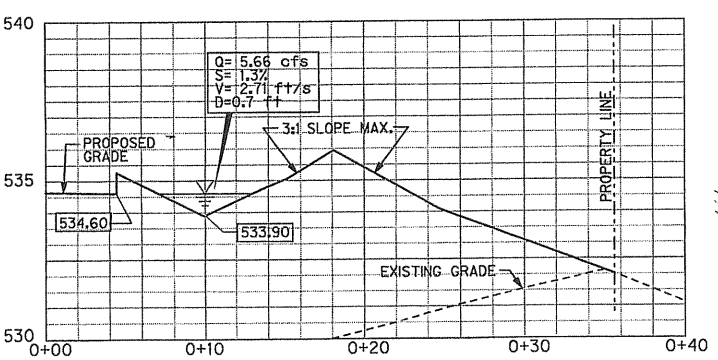
**NOT AS-BUILT
PLANS.
ENGINEER
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RECORD
DRAWINGS TO**

GENERAL NOTES:

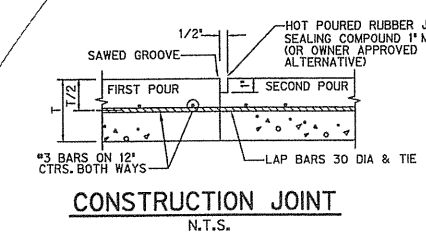
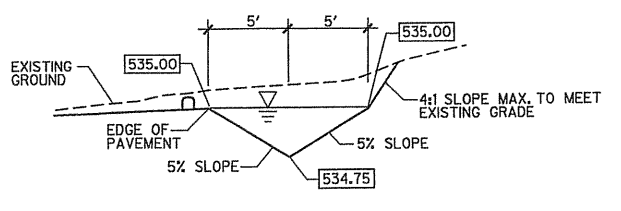
- Contractor is responsible for, and must obtain prior to construction, all necessary construction permits required by the City of Rockwall, Texas.
- All site work details shall be done in accordance with the Standard Details of the City of Rockwall and conform to the requirements of the plans and contract documents.
- Existing utility locations shown are taken from available records provided by the utility Owner and field locations of surface appurtenances. Locations shown are generally schematic in nature and may not accurately reflect the size and location of each particular utility. Some utility lines may not be shown. Contractor shall assume responsibility for actual field location and protection of existing facilities whether shown or not. Contractor shall also assume responsibility for repairs to existing facilities, whether shown or not, damaged by contractor's activities. Differences in horizontal or vertical location of existing utilities shall not be a basis for additional expense.
- The Contractor shall protect existing property monumentation and primary control. Any such points which the Contractor believes will be destroyed shall have offset points established by the Contractor prior to construction. Any monumentation destroyed by the Contractor shall be reestablished at his expense.
- It shall be the responsibility of the Contractor to:
 - Prevent any damage to private property and property owner's poles, fences, shrubs, etc.
 - Provide access to all drives during construction.
 - Protect all underground utilities to remain in service.
 - Notify all utility companies and verify location of all utilities prior to start of construction.
- Barriering and traffic control during construction shall be the responsibility of the Contractor and shall conform to the "Texas Manual on Uniform Traffic Control Devices", Part VII in particular. Traffic flow and access shall be maintained during all phases of the construction. The Contractor is responsible for providing traffic safety measures for work on project.
- The Contractor shall abide by all applicable federal, state, and local laws governing excavation. The Contractor shall provide detailed plans and specifications for trench safety systems that comply with applicable laws governing excavation. These plans shall be sealed by an Engineer experienced in the design of trench safety systems and licensed by the State of Texas. Submit plan to the Owner prior to commencing work. The Contractor shall be solely responsible for all aspects of work related to excavation.
- Contractor shall maintain drainage at all times during construction. Ponding of water in streets, drives, truck courts, trenches, etc., will not be allowed.
- Pavement removal and repair shall conform to the City of Rockwall requirements. All sawcuts shall be full depth cuts. Contractor shall make efforts to protect concrete and/or asphalt edges. Any large spalled or broken edges shall be removed by sawcutting pavement prior to replacement.
- Any damages that may occur to real property or existing improvements shall be restored by the Contractor to at least the same condition that the real property or existing improvements were in prior to the damages. This restoration shall be subject to the Owner's approval; moreover, this restoration shall not be a basis for additional compensation to the Contractor. Restoration shall include, but not be limited to, regrading, revegetation, replacing fences, replacing trees, etc.
- For pavement thickness use minimum 3,000 p.s.i. reinforced concrete pavement with #3 bars at 24" on center for all light traffic areas, paving thickness is 6".
- Concrete paving joints shall be constructed every 12' on center each way. Expansion Joints shall be placed at changes in direction of paving, at driveways and/or as shown on the drawings. Seal all joints as shown on the drawings. (See this sheet for details).
- Site grading and pavement subgrade shall be prepared in accordance with detail on this sheet and per the standard details of the City of Rockwall.
- All dimensions are to face of curb and are perpendicular to property line.
- Contractor's work shall include pavement removal and disposal required for new walk, drive, curb, gutter and other grading features. Contractor shall be responsible for all coordination, inspection and testing required by the Owner and/or the City of Rockwall.
- All sidewalks shall maintain 2% cross slope maximum.
- Contractor shall maintain existing sanitary sewer and water service at all times during construction.
- Contractor shall locate and adjust existing utility manhole lids, cleanouts, water valves and other surface appurtenances as required for new construction. Contractor shall coordinate utility adjustments with other disciplines and the appropriate utility agencies and provide for all fees for permits, connections, inspections, etc.
- Onsite planimetric and topographic mapping taken from data provided by Half Associates, Inc., dated June 2005.
- The Contractor shall administer sprinklers for dust control, earthwork or base construction as required or as directed by the Owner in accordance with TxDOT specifications Item 201.
- All fill shall be free of organic material and debris, have a plasticity index between 15 and 35, have an optimal liquid limit of 35 or less and contain no rocks or pieces larger than 3" greatest dimension.
- The Contractor shall contact owner for lighting and irrigation layout and construction.
- All fill to be compacted using a sheeps foot roller.
- See sheet 3.01 and 3.02 for Drainage work. See sheet 4.01 and 4.02 for Erosion Control notes and details.



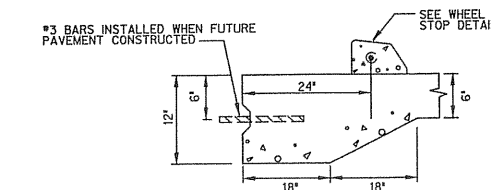
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SCALE: H- 1"=30'
V- 1"=5'



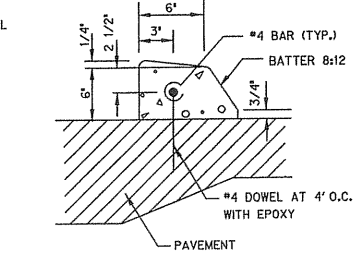
CROSS SECTION B-B
SCALE: H- 1"=60'
V- 1"=3'



CONSTRUCTION JOINT
N.T.S.



KEYWAY JOINT
N.T.S.



WHEEL STOP
N.T.S.

NOTE:
1. CONCRETE SHALL BE CLASS 'C'.

SURVEY CONTROL POINTS

NO.	N	E	ELEV.	DESCRIPTION
305	198986.18	300992.49	537.52	*X IN CURB
308	199372.25	300964.33	539.40	FND *X IN CURB

LAKE POINTE CHURCH
SOUTHEAST PARKING IMPROVEMENTS
ROCKWALL, TEXAS



APPROVED FOR CONSTRUCTION

NOV - 2 2005

City of Rockwall Engineering Dept.
City Engineer: _____

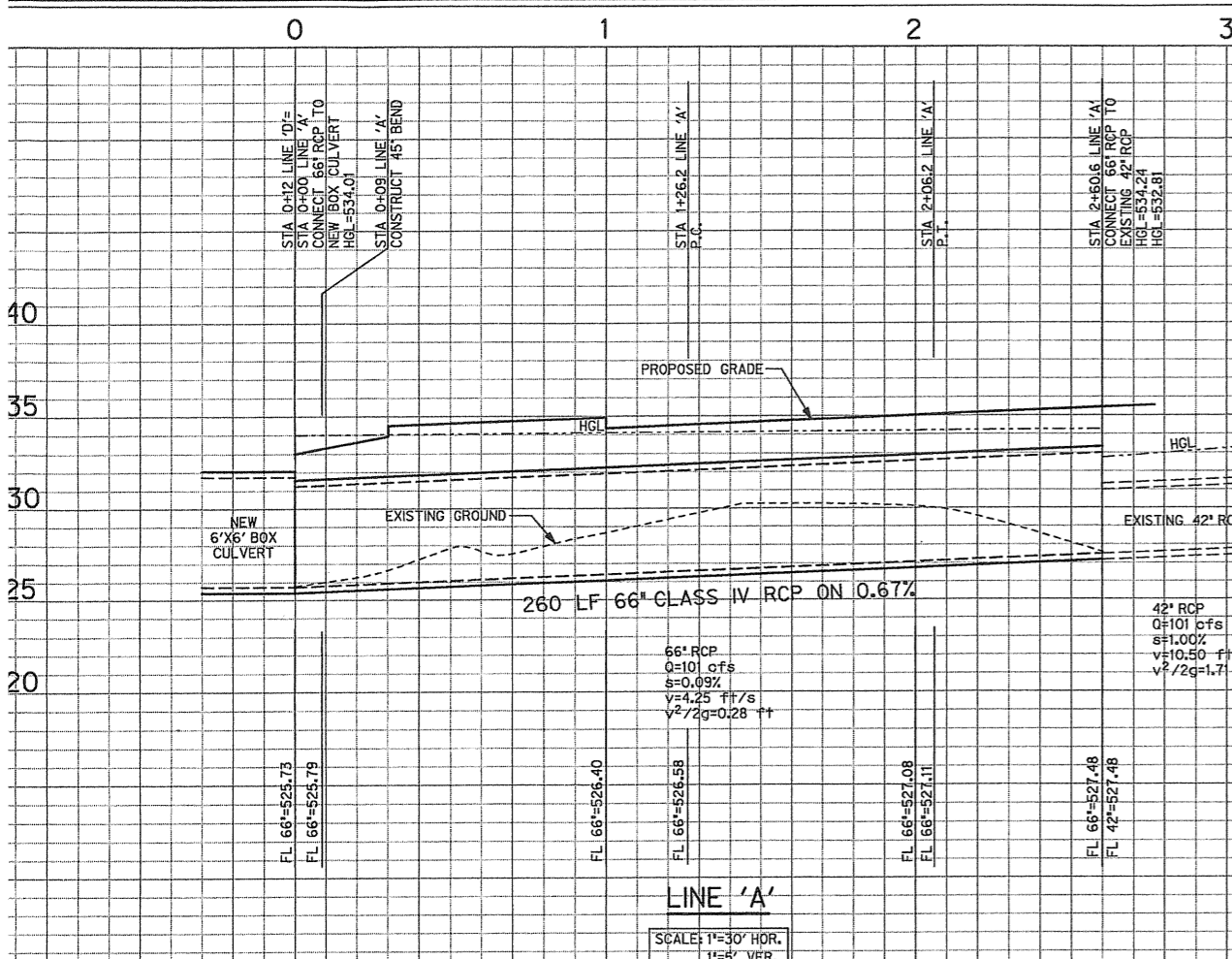
Half Associates, Inc.
ENGINEERS • ARCHITECTS • SCIENTISTS • PLANNERS • SURVEYORS
8616 NORTHWEST PLAZA DRIVE
DALLAS, TEXAS 75225
TEL (214) 346-6200
FAX (214) 739-0095

Project No: AVO # 21760

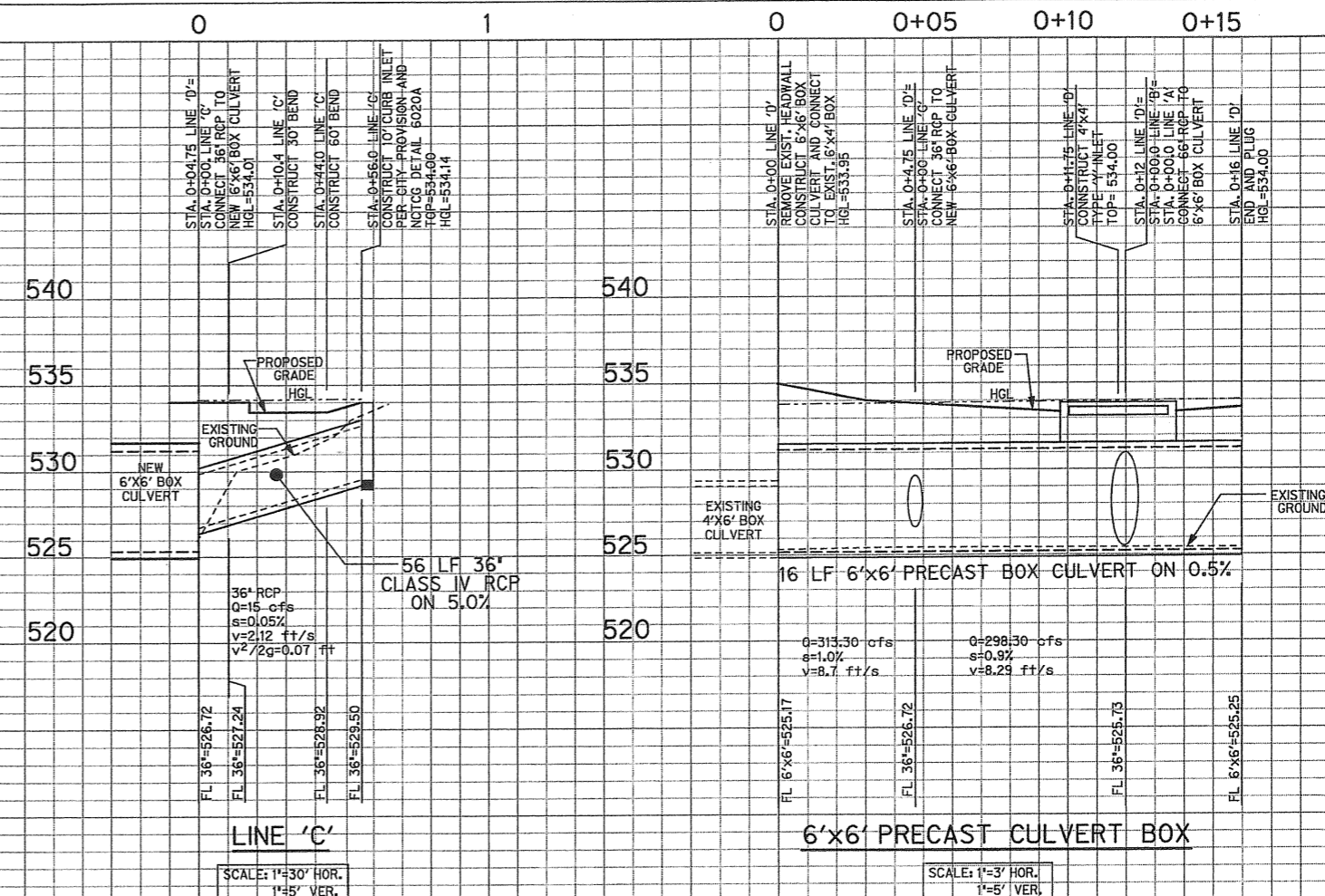
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Revisions:	No.	Date	Description

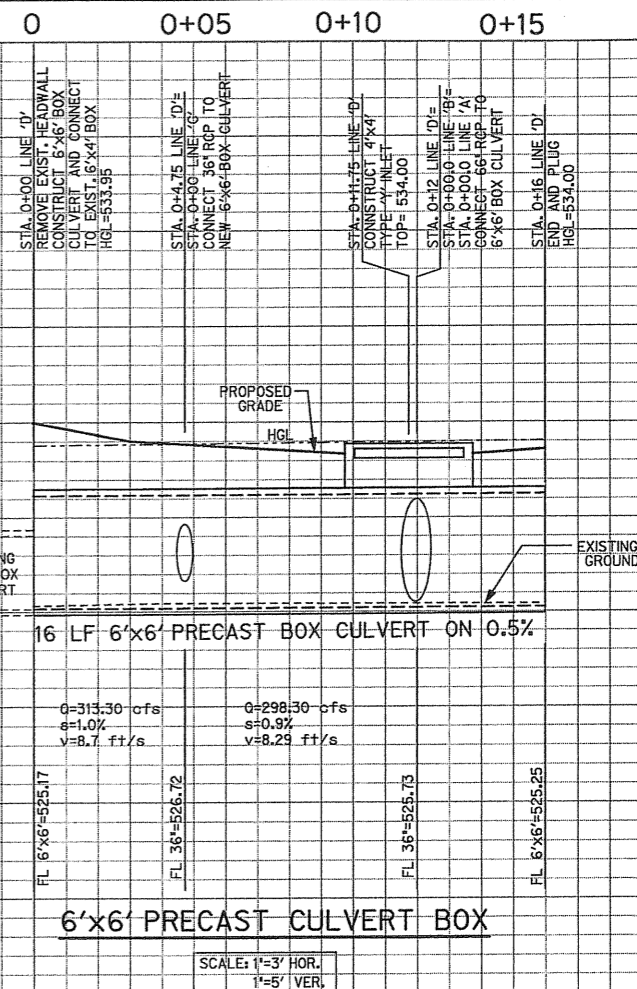
Drawn by: JLS



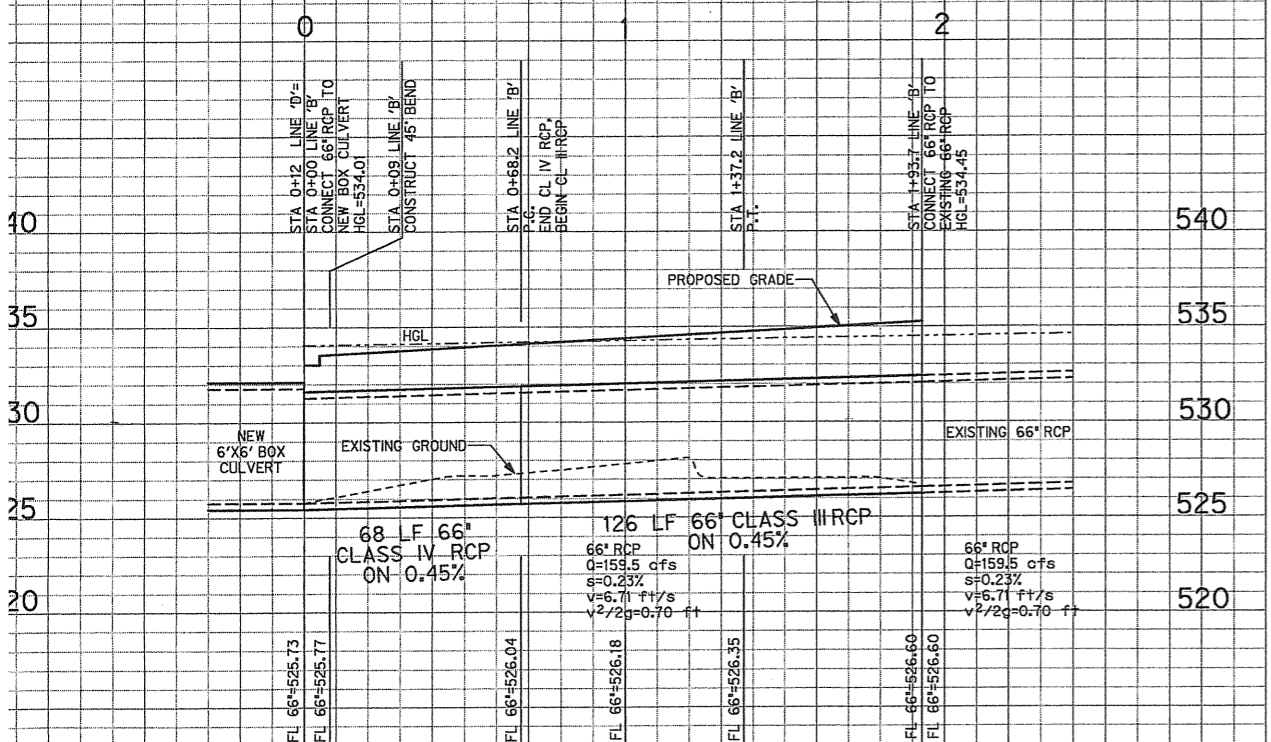
LINE 'A'
SCALE: 1"=30' HOR.
1"=5' VER.



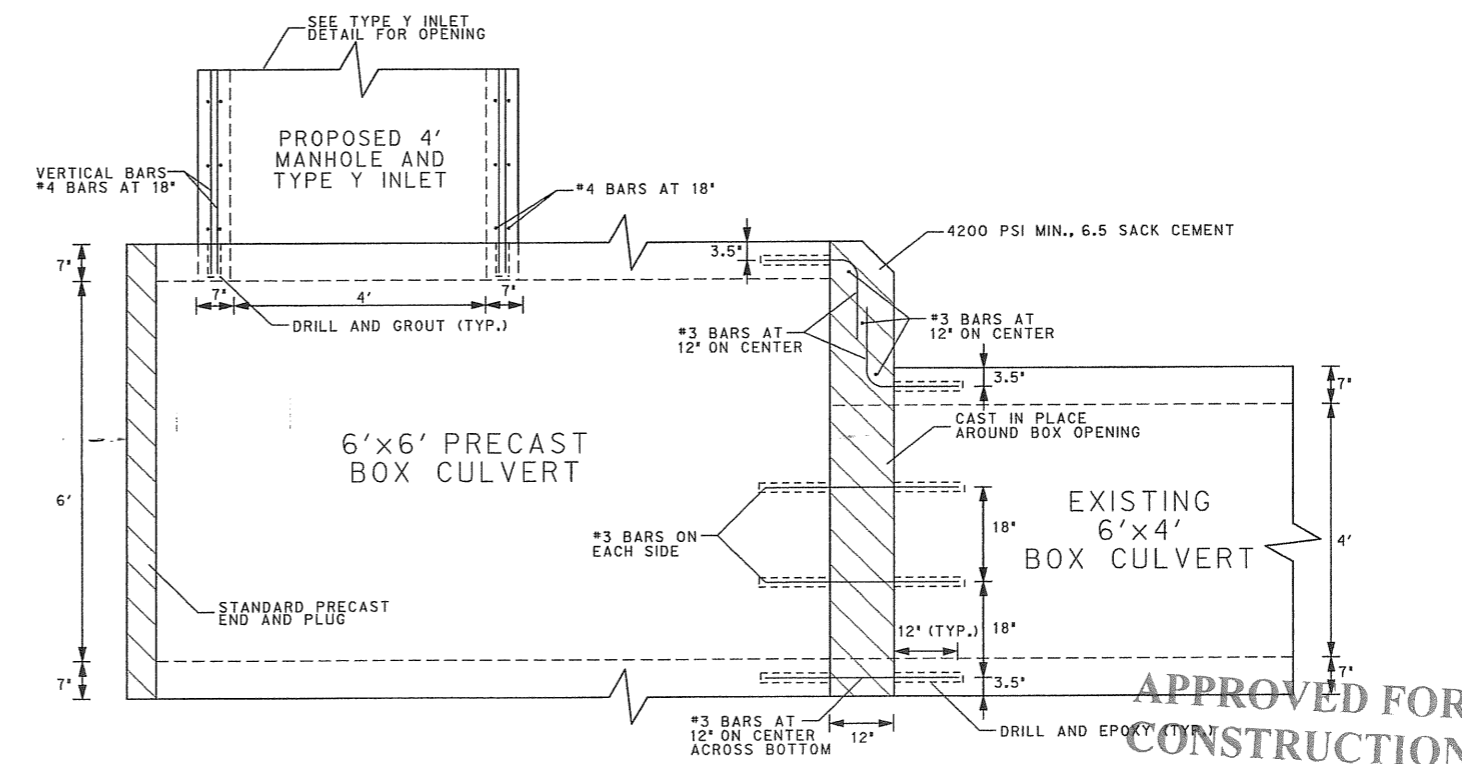
LINE 'C'
SCALE: 1"=30' HOR.
1"=5' VER.



6'x6' PRECAST CULVERT BOX
SCALE: 1"=3' HOR.
1"=5' VER.



LINE 'B'
SCALE: 1"=30' HOR.
1"=5' VER.



BOX CULVERT CONNECTION DETAIL
N.T.S.

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NOV - 2 2005

City of Rockwall Engineering Dept.
City Engineer: _____

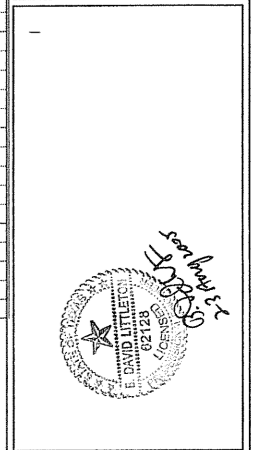
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321	198920.82	301129.61	542.42	60D NAIL

SCALE: 1"=30' HOR.
1"=5' VER.

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FAX (214) 739-0095

Project No: AVO # 21760
Revisions:

No.	Date	Description

Drawn by: JLS
Checked by: JLR
Sheet Title: **STORM DRAIN PROFILES**
C3.02
Sheet Number

Erosion Control Notes

Contractor is responsible for preparing and submitting a Storm Water Pollution Prevention Plan (SWP3) with TCEQ Texas Pollutant Discharge Permit (TPDES) Permit No. TXR150000 (PERMIT). Plans shown on this sheet represent typical methods for erosion control during construction and are subject to the Contractor's guidance in preparing his SWP3. The Contractor's plan shall be approved by the TCEQ, if the project is 5 acres or more. The Contractor shall submit a Notice of Intent (NOI) to the TCEQ, if the project is 5 acres or more. The Contractor shall provide copies of his SWP3 to the Owner.

Contractor shall be responsible for maintaining erosion control measures during construction and for obtaining any necessary permits related to drainage, or making any necessary modifications. An Inspection Log shall be maintained and copies of the SWP3 shall be provided to the Owner. The Contractor shall be responsible for the maintenance of the permanent erosion control measures at the site. The Contractor shall provide copies of his SWP3 to the Owner.

Contractor shall maintain his SWP3 in accordance with the TCEQ, EPA, and Local MS4. The Contractor shall amend his SWP3 whenever there is a change in construction, operation, or maintenance of the site. The Contractor shall inspect his stabilization and erosion control measures at a minimum of once every 14 days or once every 7 days after any storm event greater than 0.5 inches. The Contractor shall modify his SWP3 within 7 days of inspection.

Contractor shall adopt and implement appropriate site management practices to prevent the release of oil, grease, paint, gasoline, and other pollutants into storm water systems or surface waters. The Contractor shall maintain and repair equipment and machinery at all times to prevent leaks and spills. The Contractor shall designate and control equipment storage areas.

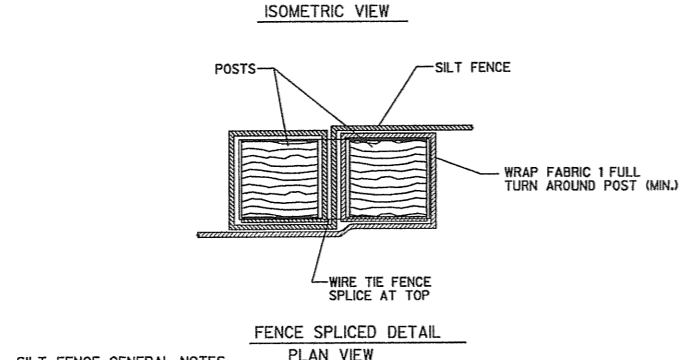
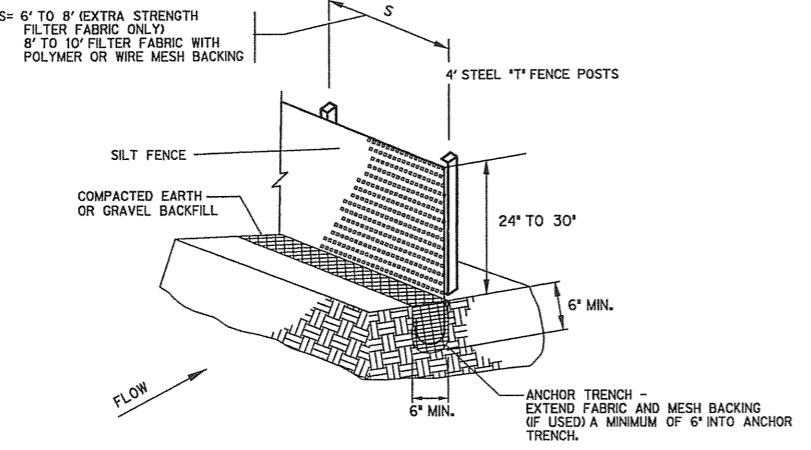
Contractor shall construct a silt fence at all disturbed areas as appropriate or as modified on the SWP3. The Contractor shall remove accumulated silt when it reaches a depth of 1/3 the height of the silt fence. The Contractor shall remove silt in a manner that does not contribute to sedimentation. The Contractor shall remove erosion control measures when the site is finally stabilized.

Contractor shall designate material and equipment storage areas mutually agreed to by the Owner. The storage areas shall be graded for positive drainage, and the storage areas shall be stabilized with a minimum of 2 inches of compacted subgrade. A silt fence and/or other erosion control measures shall be installed around the storage areas to prevent eroded material from leaving the site. The Contractor shall provide details for the storage areas to the Owner for approval.

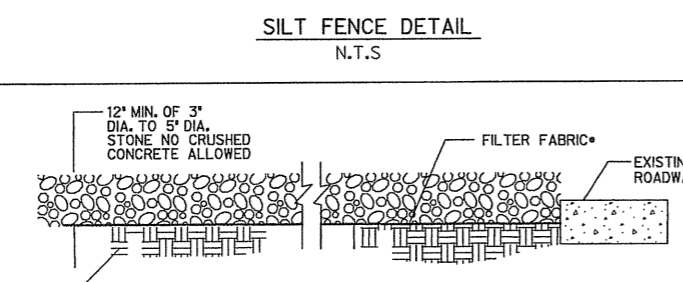
Contractor shall stabilize construction entrances with a minimum of 2 inches of compacted subgrade. The Contractor shall provide details for the construction entrances to the Owner for approval. The Contractor shall provide details for the construction entrances to the Owner for approval.

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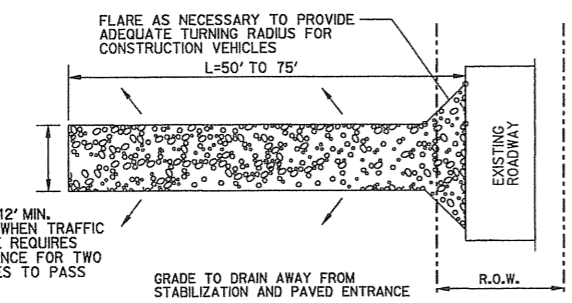


- SILT FENCE GENERAL NOTES:**
1. THE BOTTOM OF THE SILT FENCE SHALL BE SET IN ANCHOR TRENCH PER THE DETAIL. WHERE THE SILT FENCE CANNOT BE ANCHORED IN A TRENCH (E.G. PAVEMENT), SILT FENCE SHALL BE ANCHORED DOWN WITH WASHED GRAVEL.
 2. AT SPLICES IN THE SILT FENCE, THE SILT FENCE SHALL BE WRAPPED AROUND EACH END POST, ONE FULL TURN, POSTS DRIVEN ADJACENT TO EACH OTHER WITH THE TOPS OF THE POSTS SECURED TIGHTLY TOGETHER WITH WIRE TO PREVENT SEDIMENT FLOWING THROUGH THE SPLICED JOINT.
 3. SILT FENCE SHALL BE SECURELY FASTENED TO EACH SUPPORT POST.
 4. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 1/3 THE HEIGHT OF THE SILT FENCE OR AS NECESSARY TO MAINTAIN THE SILT FENCE IN GOOD OPERATING ORDER. THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
 5. SILT FENCE AND OTHER SEDIMENT CONTROLS SHALL BE MAINTAINED PER THE REQUIREMENTS OF THE PERMIT AND IT SHALL BE REMOVED AS REQUIRED BY THE PERMIT AT COMPLETION.

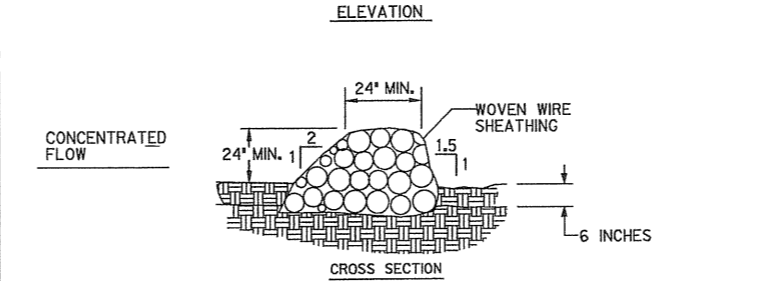
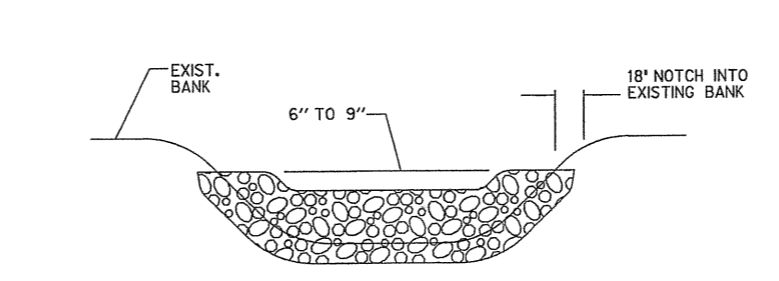
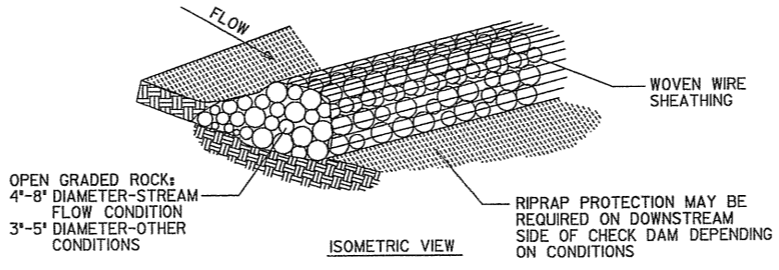


MINIMUM FILTER FABRIC SPECS.

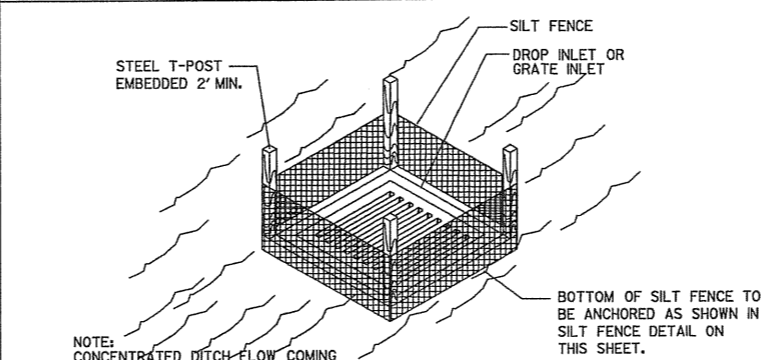
GRAB TENSILE STRENGTH	205 LBS. (ASTM D1682)
ELONGATION AT FAILURE	60% (ASTM D1682)
MULLEN BURST STRENGTH	255 LBS. (ASTM D3768)
PUNCTURE STRENGTH	80 LBS. (ASTM D751) (MODIFIED)
EQUIVALENT OPENING SIZE (EOS)	SIZE 40-80, (US STD. SIEVE) (CW-02215)



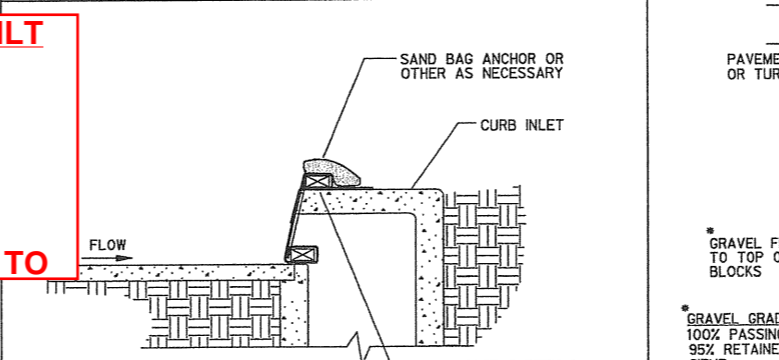
STABILIZED CONSTRUCTION ENTRANCE
N.T.S.



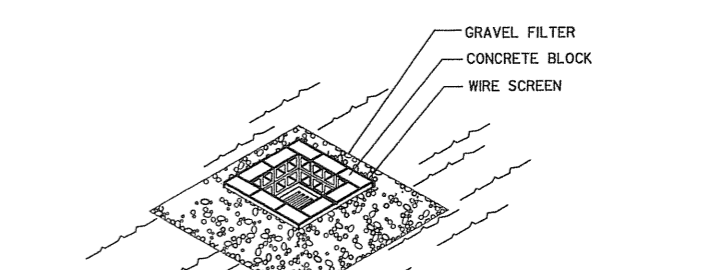
ROCK CHECK DAM
N.T.S.



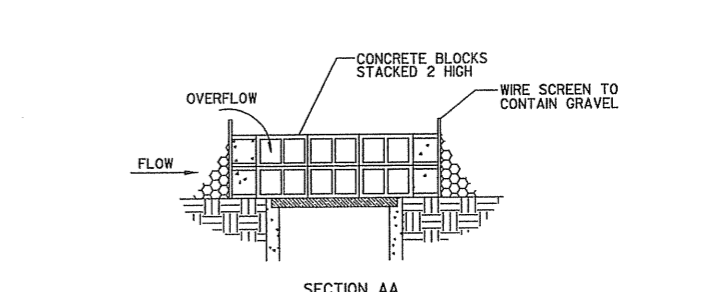
SILT FENCE DROP INLET PROTECTION
N.T.S.



FILTER FABRIC CURB INLET PROTECTION
N.T.S.

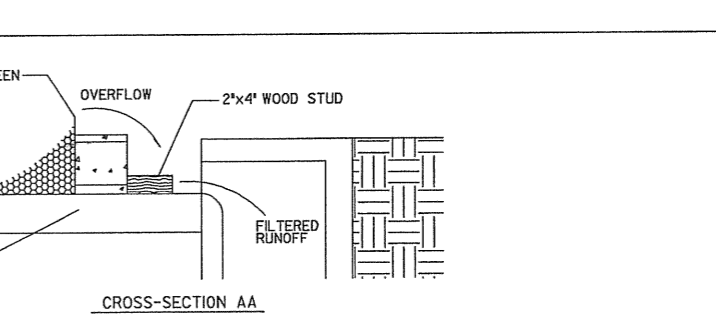


GRAVEL FILTER
N.T.S.



CONCRETE BLOCK FILTER
N.T.S.

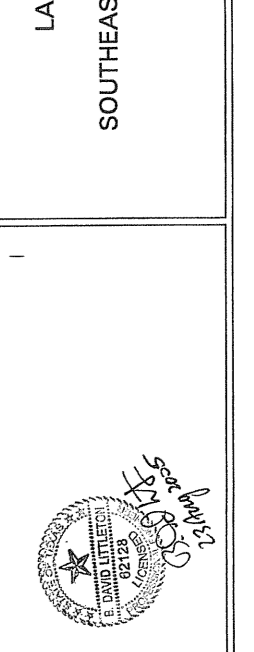
NOTE: GRAVEL FILTERS MAY BE USED ON PAVEMENT OR BARE GROUND



COMBINATION OR CURB INLET FILTER DETAIL
N.T.S.

NOT AS-BUILT PLANS. ENGINEER DIDN'T PROVIDE RECORD DRAWINGS TO

LAKE POINTE CHURCH
SOUTHEAST PARKING IMPROVEMENTS
ROCKWALL, TEXAS



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Project No: AVO # 21760
Checked by: JLR
Date: NOV - 2 2005
Sheet Title: EROSION CONTROL NOTES & DETAILS
Sheet Number: C4.02

APPROVED FOR CONSTRUCTION

NOV - 2 2005

City of Rockwall Engineering Dept.
City Engineer: